

List of All Chemicals

P *Cymbopogon parkeri* (Poaceae)

Common name(s)

Skhabar

How used

GRAS

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

| Chemical | Plant Part | Low PPM | High PPM | StdDev | *Reference |
|------------------------------|------------|---------|----------|--------|---|
| 10-METHYL-7-UNDECANONE | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| 12-METHYL-4-TRIDECANONE | Plant | -- | 259.0 | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| 12-METHYL-TRIDECANONE | Plant | 20.0 | 474.0 | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| 14-METHYL-4-PENTADECANONE | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| 2,5-DIMETHYLHEXAN-3,4-DIONE | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| 4-HYDROXY-4-METHYL-PENTANONE | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| 6-METHYL-5-HEPTEN-2-ONE | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| 7,4-METHYL-OCTANONE | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| 9-METHYL-4-DECANOL | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| ALPHA-TERPINEOL | Plant | -- | 70.0 | -0.43 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |

Activities (23)

| | |
|---|---|
| ACE-Inhibitor 100 ug/ml (weak activity) | Okamura, K., Iwakami, S., Matsunaga, T. 1992. Biological Activity of Monoterpenes from Trees. Toyama-Ken Yakuji Kenkyusho Nenpo, (20): 95-101. |
| Aldose-Reductase-Inhibitor 100 ug/ml | |
| Allelopathic | Wright,C.W.(Ed)2002.Medicinal&Aromatic Plants-Industrial Profiles.Artemisia.344pp.Maffei,M.(Ed)2002.Vetiveria.The Genus Vetiveria.Taylor&Francis.NY,NY.191pp.Southwell,I.,Lowe,R.(Eds)1999.Tea Tree.The Genus Melaleuca.Harwood Acad.Pub.Amsterdam,Netherlands. |
| Antiacne | |
| Antibacterial MIC=800-1,600 ug/ml | Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans.J. Agric. Food Chem. 41: 1102-1105. |
| Anticancer | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY. |
| Anticariogenic MIC=800-1,600 ug/ml | Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans.J. Agric. Food Chem. 41: 1102-1105. |
| Antiinflammatory | |
| Antiproliferant | |
| Antiseptic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Cicatrizant ED50=240 ug/g mus | |
| FLavor FEMA 5-40 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Insecticide 1.29 uM/fly | |
| Interleukin-6-Inhibitor | |
| Mosquitofuge > Deet | |
| Motor-Depressant | Buchbauer et al, e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC |
| Nematicide MLC=1 mg/ml | Shoyakugaku Zasshi, 44: 183. |
| Perfumery | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |

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|--|---|----|-------|---|---|
| Sedative | Buchbauer et al, e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC | | | | |
| Termiticide IC100=5 mg/g | | | | | |
| Transdermal | | | | | |
| Vulnerary | | | | | |
| ED50=240 ug/g mus | | | | | |
| ALPHA-TERPINOLENE | Plant | -- | -- | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. | |
| BETA-GURJUNENE | Plant | -- | 141.0 | 1.4 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| BETA-SITOSTEROL | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| Activities (47) | | | | | |
| Androgenic | | | | | |
| Angiogenic | | | | | |
| Anorexic | Martindale's 28th | | | | |
| Antiadrenomic | Merck 11th Edition | | | | |
| Antiandrogenic | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. | | | | |
| Antibacterial | Recently became Internat. J. Crude Drug Res. 28(1,2,3,4):1990, page 155. | | | | |
| Anticancer (Breast) | Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from Vaccinium myrtillus (Bilberry) Fruits and Cell Cultures. Plant Sci., 131(1): 95-103. | | | | |
| Anticancer (Cervix) | | | | | |
| Anticancer (Lung) | | | | | |
| Antiedemic IC54=320 mg/kg orl | | | | | |
| Antiestrogenic | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. | | | | |
| Antifeedant | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. | | | | |
| Antifertility | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. | | | | |
| Antigonadotrophic | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. | | | | |
| Antihyperlipoproteinaemic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | | |
| Antiinflammatory | | | | | |
| Antileukemic | | | | | |
| Antilymphomtic | | | | | |
| Antimutagenic 250 ug/ml | | | | | |
| Antiophidic 2.3 mg mus | Economic & Medicinal Plant Research, 5: 363. | | | | |
| Antioxidant IC44=10 uM | | | | | |
| Antiprogestational | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. | | | | |
| Antiprostaglandin 30 mg/day/12 wks | | | | | |
| Antiprostatadenomic | Merck 11th Edition | | | | |
| Antiprostatitic 10-20 mg 3 x/day/orl man | | | | | |
| Antipyretic | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. | | | | |
| Antitumor (Breast) | Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from Vaccinium myrtillus (Bilberry) Fruits and Cell Cultures. Plant Sci., 131(1): 95-103. | | | | |
| Antitumor (Cervix) | | | | | |
| Antitumor (Lung) | | | | | |
| Antiviral | Abid Ali Khan, M.M., Jain, D.C., Bhakuni, R.S., Zaim, M., and Thakur, R.S. 1991. Occurrence of some antiviral sterols in Artemisia annua. Plant Science, 75: 161-165, 1991. | | | | |
| Apoptotic | | | | | |
| Artemicide LC50=110 ppm | Jung, J.H., Pummangura, S., Chaichantipyuth, C., Patarapanich, C., and McLaughlin, J.L. 1989. Bioactive Constituents of Melodorum fruticosum. Phytochemistry. 29(5): 1667-1670. 1990. | | | | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. | | | | |
| Candidicide | Recently became Internat. J. Crude Drug Res. 28(1,2,3,4):1990, page 155. | | | | |
| Caspase-8-Inducer | | | | | |
| Estrogenic | | | | | |
| Febrifuge | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. | | | | |
| Gonadotrophic | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. | | | | |
| Hepatoprotective | | | | | |
| Hypocholesterolemic 2-6 g/man/day/orl | Martindale's 30th | | | | |
| Hypocholesterolemic 9-3,330 mg/man/day/orl | Martindale's 28th | | | | |
| Hypoglycemic | Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. Journal of Ethnopharmacology, 27: 243-275, 1989. | | | | |
| Hypolipidemic 2-6 g/day | | | | | |
| Pesticide | | | | | |
| Spermicide | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. | | | | |
| Ulinquin | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost | | | | |

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|----------------------------------|---|-------|---------|---|---|
| BORNYL-ACETATE | Plant | -- | -- | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. | |
| Activities (12) | | | | | |
| (-)Chronotropic 933 nM/ml | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. | | | | |
| (-)Inotropic 933 nM/ml | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. | | | | |
| Antibacterial | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. | | | | |
| Antifeedant | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. | | | | |
| Antispasmodic ED50=0.09 mg/ml | Fitoterapia No.59-1984. | | | | |
| Antiviral | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. | | | | |
| Expectorant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | | |
| FLavor FEMA 70-80 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | | |
| Insectifuge | Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin. | | | | |
| Myorelaxant | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. | | | | |
| Pesticide | | | | | |
| Sedative | | | | | |
| BUTYL-ACETATE | Plant | -- | -- | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. | |
| CAMPESTEROL | Plant | -- | -- | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. | |
| Activities (2) | | | | | |
| Antioxidant IC37=10 uM | | | | | |
| Hypocholesterolemic | Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705. | | | | |
| CAR-3-ENE | Plant | -- | -- | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. | |
| CHOLESTEROL | Plant | -- | -- | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. | |
| Activities (1) | | | | | |
| Antioxidant IC43=10 uM | | | | | |
| CRYPTOMERIDIOL | Plant | -- | -- | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. | |
| DECANE | Plant | -- | 42.0 | 1.41 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| DIETHYLBENZENE | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| DODECANE | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| EO | Plant | -- | 15500.0 | 0.44 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| EUDESMOL | Plant | 254.0 | 1004.0 | 1.0 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| FARNESAL | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| Activities (2) | | | | | |
| Juvabional Pesticide | Russell, G. B., Phytochemical resources for crop protection, N. Z. J. Technol., 2, 1986, 127-134. | | | | |
| FARNESOL | Plant | 315.0 | 1249.0 | 2.0 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| Activities (17) | | | | | |
| Allergenic | | | | | |
| Antiadenomic | | | | | |
| Anticancer (Pancreas) IC50=39 uM | | | | | |

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|--------------------------------|--|--|--|--|---|
| Anticarcinomic (Lung) | | | | | |
| Antileukemic | | | | | |
| Antimelanomic IC50=50 uM/l | | | | | |
| Antispasmodic | | | | | |
| Apoptotic | | | | | |
| FLavor FEMA 0.1-3 | | | | | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Juvabional | | | | | Russell, G. B., Phytochemical resources for crop protection, N. Z. J. Technol., 2, 1986, 127-134. |
| Nematicide MLC=100 ug/ml | | | | | Shoyakugaku Zasshi, 44: 183. |
| Perfumery | | | | | Merck 11th Edition |
| Pesticide | | | | | |
| Pheromonal | | | | | |
| Sedative | | | | | |
| Trichomonicide LD100=100 ug/ml | | | | | |

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|----------|-------|------|--------|-----|---|
| GERANIAL | Plant | 17.0 | 1290.0 | 0.0 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
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Activities (13)

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|----------------------|--|--|--|--|---|
| AntiEBV IC50=16 uM | | | | | |
| Antiaflatoxin | | | | | |
| Antibacterial | | | | | Onawunmi, G.O., Yisak, W-A., Ogunlana,* E.O. 1984. Antibacterial Constituents In The Essential Oil Of Cymbopogon citratus (DC.) Stapf. Journal of Ethnopharmacology, 12: 279-286, 1984. |
| Antitumor (Colon) | | | | | |
| Antitumor (Skin) | | | | | |
| Antiviral IC50=16 uM | | | | | |
| Antiyeast | | | | | |
| Chemopreventive | | | | | |
| Estrogenic | | | | | |
| Fungicide | | | | | |
| Glutathionigenic | | | | | |
| Pesticide | | | | | |
| Spasmolytic | | | | | |

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|----------|-------|--------|--------|------|---|
| GERANIOL | Plant | 2968.0 | 7474.0 | 0.83 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
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Activities (35)

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|-----------------------------------|--|--|--|--|--|
| Allergenic | | | | | |
| Anthelmintic | | | | | Madaus, G. 1976. Lehrbuch der Biologischen Hilfsmittel. Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. |
| Antibacterial MIC=400 ug/ml | | | | | Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105. |
| Antibacterial MIC=64 ug/ml | | | | | |
| Antibacterial MBC=800 ug/ml | | | | | |
| Anticancer (Pancreas) IC50=265 uM | | | | | |
| Anticariogenic MIC=400 ug/ml | | | | | Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105. |
| Antimelanomic IC50=150 uM/l | | | | | |
| Antisalmonella MIC=400 ug/ml | | | | | |
| Antiseptic 7 x phenol | | | | | Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176) |
| Antiseptic MIC=64 ug/ml | | | | | |
| Antiseptic 400-800 ug/ml | | | | | |
| Antispasmodic | | | | | Buchbauer, G., Jirovetz*, L., Nikiforov, A., Remberg, G., Raverdin, V. 1989. Headspace-Analysis and Aroma Compounds of Austrian Hay-Blossoms (Flores Graminiis, Graminis Flos) used in Aromatherapy. J. Ess. Oil Res., 2: 185-191, 1990. |
| Antitubercular MIC=64 ug/ml | | | | | |
| Antitumor | | | | | Yu, S.G., Anderson, P.J., and Elson, C.E. 1995. Efficacy of B-Ionone in the Chemoprevention of Rat Mammary Carcinogenesis. J. Agric. Food Chem. 43: 2144-2147. |
| Antitumor (Pancreas) IC50=265 uM | | | | | |
| Ascaricide | | | | | Madaus, G. 1976. Lehrbuch der Biologischen Hilfsmittel. Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. |
| CNS-Stimulant | | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| Cancer-Preventive | | | | | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | | | | | |
| Embryotoxic | | | | | |
| Emetic 3 x ipecac | | | | | Lawrence Review of Natural Products, Sep-97. |

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|-----------------------------------|--|
| FLavor FEMA 1-10 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungicide IC93=2 mM | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Herbicide IC100-2,000 μ M | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Insectifuge 50 ppm | |
| Insectiphile | Merck 11th Edition |
| Mycobactericide MIC=64 ug/ml | |
| Nematicide IC86=100 ug/ml | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Nematicide MLC=1,000 ug/ml | Shoyakugaku Zasshi, 44: 183. |
| Perfumery | Merck 11th Edition |
| Pesticide | |
| Sedative | |
| Trichomonicide LD100=300 ug/ml | |

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|-----------------|-------|-------|--------|------|---|
| GERANYL-ACETATE | Plant | 214.0 | 1589.0 | 1.35 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
|-----------------|-------|-------|--------|------|---|

Activities (5)

| | |
|------------------|--|
| Allergenic | |
| FLavor FEMA 1-20 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Insectiphile | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Perfumery | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Sedative | Jim Duke's personal files. |

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|-------------------|-------|----|----|---|
| GERANYL-BUTANOATE | Plant | -- | -- | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
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|--------------------|-------|------|-------|---|
| GERANYL-HEPTANOATE | Plant | 15.0 | 107.0 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
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|-------------------|-------|------|-------|---|
| GERANYL-HEXANOATE | Plant | 23.0 | 226.0 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
|-------------------|-------|------|-------|---|

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|-------------------|-------|------|-------|---|
| GERANYL-OCTANOATE | Plant | 26.0 | 172.0 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
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|------------------|-------|----|----|---|
| GERANYL-VALERATE | Plant | -- | -- | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
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|--------|-------|----|------|-----|---|
| GUAIOL | Plant | -- | 99.0 | 1.0 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
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Activities (3)

| | |
|-------------|--|
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Termitifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |

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|----------|-------|------|-------|------|---|
| LIMONENE | Plant | 20.0 | 634.0 | -0.1 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
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Activities (60)

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|---------------------------------------|--|
| AChe-Inhibitor | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, Oest. Biochem. & Physiol., 23, 1985, 383-8. |
| Acaricide LC100=8 μ M | |
| Allelochemic | |
| Allergenic 1/20th carene | |
| Antiacylcholinesterase IC22-26=1.2 mM | |
| Antidiabetic | |
| Antialzheimeran? | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, Oest. Biochem. & Physiol., 23, 1985, 383-8. |
| Antiasthmatic | |
| Antibacterial | Revista Itiliana Eppos, 12: 5, 1994. |
| Anticancer | |
| Antiesophagitic | |
| Antifeedant | |
| Antiflu | Economic & Medicinal Plant Research, 5: 195. |
| Antiinflammatory | |
| Antilithic | |
| Antilymphomtic | |

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| Antimutagenic | Economic & Medicinal Plant Research, 6: 235. |
| Antiobesity | |
| Antiseptic | |
| Antispasmodic ED50=0.197 mg/ml | Fitoterapia No.59-1984. |
| Antitumor | |
| Antitumor (Breast) | |
| Antitumor (Colon) | |
| Antitumor (Pancreas) | |
| Antitumor (Prostate) | |
| Antitumor (Stomach) | |
| Antiviral | |
| Apoptotic | |
| Bronchoprotectant | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidstat | |
| Chemopreventive | |
| Cholesterolytic | |
| Detoxicant | |
| Enterococontractant | J. Aromatherapy 4: 22. |
| Expectorant | |
| FLavor | |
| Fungiphilic | J. Agric. Food Chem. 43: 2283. |
| Fungistat | |
| GST-Inducer | |
| Herbicide IC50=45 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Histaminic | |
| Immunomodulator | |
| Insecticide 0.37 uM/fly | |
| Insectifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Interleukin-6-Inhibitor | |
| Irritant | |
| Lipolytic | |
| Myorelaxant 50 mg/kg | |
| NO-Genic | |
| Nematicide IC=100 ug/ml | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Ornithine-Decarboxylase-Inhibitor ~750 mg/kg (diet) | |
| Ozone-Scavenger | |
| P450-Inducer | |
| Peristaltic | |
| Pesticide | |
| Photosensitizer | Rinzler, C. A. 1990. The Complete Book of Herbs, Spices and Condiments. Facts on File, New York. 199 pp. |
| Sedative ED=1-32 mg/kg | Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176) |
| Transdermal | |

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|----------------------|-------|------|-------|-------|---|
| LINALOL | Plant | 39.0 | 499.0 | -0.32 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| METHYL-ETHYL-BENZENE | Plant | -- | -- | -- | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| NERAL | Plant | 42.0 | 583.0 | -0.23 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |

Activities (4)

| | |
|--------------------------|---|
| Antibacterial | Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp. |
| Antispasmodic | |
| Pesticide | |
| Termiticide LD100=5 mg/g | |

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|-------|-------|--------|--------|------|---|
| NEROL | Plant | 2059.0 | 6189.0 | 3.55 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
|-------|-------|--------|--------|------|---|

Activities (10)

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|------------------|---|
| Antibacterial | HerbalGram No. 17. |
| Antihelicobacter | |
| Antiseptic | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Antiulcer | |

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|-----------------------------------|--|--|--|--|
| FLavor FEMA 1-20 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | |
| Perfumery | Merck 11th Edition | | | |
| Pesticide | | | | |
| Sedative | Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. | | | |
| Trichomonicide ED100=300 ug/ml | | | | |

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|---------------|-------|-------|--------|------|---|
| NERYL-ACETATE | Plant | 333.0 | 1846.0 | 2.42 | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
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Activities (5)

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|------------------|---|--|--|--|--|
| Antiflu | | | | | |
| Antiviral | | | | | |
| FLavor FEMA 1-15 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | | |
| Pesticide | | | | | |

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|-----------------|-------|----|-------|--|---|
| NERYL-BUTANOATE | Plant | -- | 107.0 | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
|-----------------|-------|----|-------|--|---|

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|-----------------|-------|----|-------|--|---|
| NERYL-HEXANOATE | Plant | -- | 143.0 | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
|-----------------|-------|----|-------|--|---|

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|-----------------|-------|------|-------|--|---|
| NERYL-OCTANOATE | Plant | 14.0 | 218.0 | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
|-----------------|-------|------|-------|--|---|

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|--------|-------|----|----|--|---|
| NONANE | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
|--------|-------|----|----|--|---|

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|--------------------|-------|----|----|--|---|
| P-COUMARYL-ALCOHOL | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
|--------------------|-------|----|----|--|---|

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|----------|-------|----|----|--|---|
| P-CYMENE | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
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Activities (16)

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|---|--|--|--|--|--|
| Analgesic | Martindale's 28th | | | | |
| Antiacetylcholinesterase IC40=1.2 mM | | | | | |
| Antibacillary | | | | | |
| Antibacterial | | | | | |
| Antiflu | | | | | |
| Antirheumatalgic | Martindale's 28th | | | | |
| Antiviral | | | | | |
| FLavor FEMA 12-250 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | | |
| Fungicide | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. | | | | |
| Herbicide IC50=50 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. | | | | |
| Insectifuge | Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin. | | | | |
| Irritant | Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. | | | | |
| Laxative | Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. | | | | |
| Pesticide | | | | | |
| Sedative | Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. | | | | |
| Trichomonicide LD100=50 ug/ml | | | | | |

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|------------------------------|-------|----|----|--|---|
| QUERCETIN-3,4'-DIMETHYLETHER | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
|------------------------------|-------|----|----|--|---|

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|--------------|-------|----|----|--|---|
| STIGMASTEROL | Plant | -- | -- | | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
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Activities (12)

| | | | | | |
|-------------------------------|---|--|--|--|--|
| Antihepatotoxic | | | | | |
| Antiinflammatory | Lawrence Review of Natural Products, 1995 | | | | |
| Antinociceptive | | | | | |
| Antiophidic 2.3 mg ipr mus | Economic & Medicinal Plant Research, 5: 363. | | | | |
| Antioxidant IC33=10 uM | | | | | |
| Antiviral | Abid Ali Khan, M.M., Jain, D.C., Bhakuni, R.S., Zaim, M., and Thakur, R.S. 1991. Occurrence of some antiviral sterols in Artemisia annua. Plant Science, 75: 161-165, 1991. | | | | |

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|---|---|
| LC50=110 ppm | Phytochemistry. 29(5). 1007-1070. 1990. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Estrogenic | |
| Hypocholesterolemic | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Ovulant | |
| Sedative | |
| TOLUENE | Plant -- -- Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| Activities (1) | |
| Encephalopathic | Martindale's 29th |
| UMBELLIFERONE | Plant -- -- Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| Activities (22) | |
| Aldose-Reductase-Inhibitor IC50=4.8 ug/ml cow | Okada,Y,et al.1995.Search for Naturally Occurring Substances to Prevent the Complications of Diabetes.II.Inhibitory Effect of Coumarin and Flavonoid Derivatives on Bovine Lens Aldose Reductase and Rabbit Platelet Aggregation.Chem Pharm Bull43(8):1385-1387 |
| Allelochemical IC94=2 mM | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Antibacterial | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antidiabetic | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Antihistaminic | |
| Antiinflammatory | |
| Antimitotic 5-25 ug/ml | Gawron, A. and Glowniak, K. 1987. Cytostatic Activity of Coumarins in vitro. Planta Medica 1987: 526. |
| Antimutagenic | Economic & Medicinal Plant Research, 6: 235. |
| Antiprostaglandin | |
| Antiseptic | |
| Antispasmodic | |
| Antistaphylococcic | |
| Cancer-Preventive 5-25 ug/ml | Gawron, A. and Glowniak, K. 1987. Cytostatic Activity of Coumarins in vitro. Planta Medica 1987: 526. |
| Candidicide | |
| Choleretic | |
| Fungicide | Williamson, E. M. and Evans, F. J. Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Lipoxygenase-Inhibitor | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Photoactive | |
| Sunscreen | Merck 11th Edition |
| Xanthine-Oxidase-Inhibitor | Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingston, Edinburgh. |
| UNDECANE | Plant -- -- Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| XYLENE | Plant -- 56.0 Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |